March 7, 2003

MEMORANDUM FOR THE SECRETARY

THROUGH: **MR. PETER MCPHERSON**
CHAIR, SECRETARY OF ENERGY ADVISORY BOARD

FROM: **DR. WILLIAM BRINKMAN**
EXTERNAL CHAIR, LABORATORY OPERATIONS BOARD

SUBJECT: Activities of the External Members of the Department of Energy Laboratory Operations Board, March 2002-March 2003: A Letter Report

Introduction

The newly appointed external members of the Laboratory Operations Board met for the first time in March 2002. During the year since that meeting, we have been following and observing current practices at the labs and changes and restructuring of the management functions at the Department of Energy. This report is intended to report on the progress we see the Department making towards improving the strategic direction and management of its laboratories. We will note where work remains and describe what we see as priorities to address during the next year.

Background

The Secretary of Energy established the Laboratory Operations Board in April 1995 to provide focused, regular attention to issues facing the Department's laboratory complex. The Board now consists of 12 or 13 external members and 12 senior officials, lab directors and operations office managers from the Department.

The charter states that the external members of the Board, who are constituted as a subcommittee of the Secretary of Energy Advisory Board, shall provide semi-annual reports to the Secretary through the Secretary of Energy Advisory Board. The reports are to assess progress by the Department and the laboratories in meeting goals in areas such as management initiatives, productivity improvement, mission focus and programmatic accomplishments.

The main outcomes that the Laboratory Operations Board is seeking are a more efficient and effective laboratory system and greater confidence in the Department's management and operations of the laboratories. Taxpayers must have confidence that the laboratories are cost-effective and produce the highest quality technical and scientific results.

Summary of Activities—March 2002 to March 2003

In the year since the March 2002 meeting, the Board has focused on three issues.

- Best management practices at the labs,
- A contracting issue—"Other Transactions Authority," and
- The value of and policies impacting industrial partnering and technology transfer at the DOE laboratories.

The Management Best Practices Study is underway but will require additional work to be useful for the DOE laboratory complex. In looking at management best practices, we have visited nine laboratories to learn what best practices are employed that address areas of the President's Management Agenda. We will continue with additional visits to laboratories.

In addition to these visits, we are now visiting major industry research and development laboratories to learn how leading industrial labs manage research, develop emerging businesses, and use benchmarking activities to enhance their productivity. In this effort, we are focusing on two initiatives listed in the President's Management Agenda: budget and performance integration and strategic management of human capital.

During the process of visiting the DOE laboratories, the Best Practice Working Group members have become increasingly aware that some of the management problems that hamper productivity at the laboratories are due to the nature of the interface between the labs and DOE headquarters. The working group is seeking solutions to these problems in its discussions with the industrial labs it is visiting. Recent restructuring efforts driven by DOE's cognizant program offices are addressing this interface, and both this working group and the full Laboratory Operations Board will continue its oversight to monitor the effects of these changes on operations at the laboratories.

Work on the second and third issues addressed by the external members culminated in two reports that are now in draft form and available on the SEAB web site. These reports address issues related to Industry Partnering and Technology Transfer and "Other Transactions Authority."

The External Members Subcommittee believes that acting on the recommendations made in these reports can lead to increased industrial partnering. Such activities are seen as extremely valuable for the health of the laboratories and as adding important value to the Nation. In the past, national laboratory partnerships with industry have served to advance significantly a number of innovative technologies that otherwise may not have been developed. The Industry Partnering report lists significant partnering activities at the labs and the resulting technologies that have benefited the nation. **The public value of these technologies underscores the importance of supporting basic science research at the DOE laboratories.**

Members of the Laboratory Operations Board Working Group who worked on these reports remain available to assist the Department in the implementation of their

recommendations should they be accepted. In particular, the members are available to speak to members of Congress or its subcommittees on the Department's behalf.

Future Activities

Restructuring and Management Best Practices. During the next year, the external members will be interested in overseeing the adoption and migration of management best practices that have promise of increasing the efficiency of operations and improve the quality of science at the labs. As part of this interest, the members will continue to oversee how the Cognizant Secretarial Offices progress in the process of restructuring their operations offices. These restructuring efforts are in line with the industrial best practice of improving the lines of communication from the Department to the labs and better assign responsibility for operations at the appropriate level.

In visiting the labs, the members have become appraised of the extent of efforts directed towards identifying and adopting best practices that is now underway at the labs, particularly in the area of program management. They also learned that some of the labs have networks for sharing best practices. The External Members find this heartening, and hope these networks can be extended and become more inclusive.

The members are of the opinion that the processes at many of the labs could be improved through better benchmarking and by selecting some clear and simple results-oriented metrics to track and evaluate the value of the changes that are being made.

During the next year, as the external members complete their efforts of identifying industrial management best practices to report back to the Department and the labs, the results of the restructuring effort will be examined in light of their findings. In particular, the LOB will be interested in suggesting approaches to benchmarking selected best practices and identifying areas for continued attention through the adoption of metrics for tracking improvements.

The approach is not intended to be prescriptive, but to work with the Department and the labs in finding management best practices that can resolve existing problems.

Interface Between the DOE Laboratories and the Department of Homeland Security. The external members foresee perturbations at the interface between the Department of Homeland Security and the Department's laboratories. The added responsibilities of the labs to perform work for the Department of Homeland Security can be expected to create strains with regard to issues that have been only tenuously resolved in the past. These include issues regarding security at both the defense labs and those labs that are considered exempt from security-related requirements, the ability of scientists to continue their work in relation to the worldwide scientific community, and the availability of funds to support critical basic science activities. How these issues are managed is a concern that the external members plan to explore during the coming year.

Also of concern is the impact of this new initiative on the Department's laboratory system as a whole. There is a danger that the additional responsibilities could become a driving force that will further separate and fracture the Department's management structure and lead to further problems for the Department in its relations with the Congress. The need for a unifying sense of how each entity contributes to the Department's missions must be clearly delineated and ascribed to by all.

Strategies for Increasing the Visibility for the Department's Science Mission. The Department of Energy, through its laboratories, contributes significantly to the Nation's ability to remain at the forefront in scientific discovery and technological innovation. However, the Department's science budget has remained flat, and other Federal agencies are out competing the Department for support of basic scientific research. The external members will examine whether there is an appropriate role for the Laboratory Operations Board in assisting the SEAB Task Force on the Future of Science Programs at the Department of Energy in its efforts to better communicate the Department's contributions to the public and Congress.

Conclusion

The External Members are pleased that they have been offered an opportunity to perform service to the Department of Energy. As members of a community that has made the management and advancement of science and technology both in the public and private sector a lifelong commitment, the welfare of the Department and its laboratories is seen as critical to the welfare of the Nation. We offer the above comments in the spirit of working with the Department to assist in improving its management of the laboratories. We are keenly aware of the Department's well-intentioned efforts to provide the best management possible within the constraints under which it operates. We are here to assist in whatever ways the Department views our assistance as valuable.